PATENT CLAIMS

1. Peptide characterized in that it comprises at least one amino acid sequence selected from the groups of amino acid sequences :

$Xaa_1\ Xaa_2 Xaa_3 Xaa_4\ Xaa_5\ Xaa_6$ Ala $Xaa_8\ Xaa_9$ Gln Thr Pro Trp $Xaa_{14} Xaa_{15}\ Xaa_{16}\ Xaa_{17}$ Xaa_{18} Val Xaa_{20} (SEQ ID NO : 1)

wherein the amino acids of the chain could have the following meanings ;
Xaa in position 1 of the peptide derivate is Lys or Arg,
Xaa in position 2 is Ala, Gly, Ser or Arg,
Xaa in position 3 is Leu or Met,
Xaa in position 4 is Gly or Arg,
Xaa in position 5 is Pro, Thr, Val, Ser, Gln or Ala,
Xaa in position 6 is Gly, Ala, Lys, Arg, Gln or Glu,
Xaa in position 8 is Thr or Ser,
Xaa in position 9 is Leu or Ile ,
Xaa in position 14 is Thr, Ser or Val,
Xaa in position 15 is Ala or Ser,
Xaa in position 16 is Cys or Ser,
Xaa in position 17 is Gln or Leu
Xaa in position 18 is Gly, Glu or Arg,
Xaa in position 20 is Gly or Arg,
the peptide comprises at least nine consecutive amino acids of the sequence of SEQ ID NO : 1,

$Xaa_1 Xaa_2\ Xaa_3\ Xaa_4\ Xaa_5$ Gly Leu Asn Pro Leu Val $[Gly]_n Xaa_{12} Xaa_{13}$ Tyr Xaa_{15} Pro $Xaa_{17} Xaa_{18}$ Ile Leu $Xaa_{21}\ Xaa_{22}$ (SEQ ID NO : 4)

wherein the amino acids of the chain have the following meaning;
Xaa in position 1 is Arg, Lys, Asp or none
Xaa in position 2 is Trp, Gly, Lys or Arg,
Xaa in position 3 is Ile, Leu, Val or Met

Xaa in position 4 is Ile, Val or Leu
Xaa in position 5 Leu, Met, Val or Pro
Xaa in position 12 is Arg, Lys
Xaa in postion 13 is Met or Leu,
Xaa in position 15 is Ser, Cys or Gln,
Xaa in position 17 is Thr, Val, Ile, Ser or Ala,
Xaa in position 18 is Ser, Gly or Thr,
Xaa in position 21 is Asp, Glu, Cys or Gly,
Xaa in position 22 is Gly or none
wherein the sequence of SEQ ID NO : 4 comprises at least six consecutive amino acids and n = 0,1,2 or 3,

$Xaa_1\ Xaa_2\ Xaa_3$ Pro Ile Pro $Xaa_7\ Xaa_8\ Xaa_9\ Xaa_{10}\ Xaa_{11}\ Xaa_{12}\ [Gly]_n\ Xaa_{13}\ Xaa_{14}\ Xaa_{15}\ Xaa_{16}\ Xaa_{17}\ Xaa_{18}\ Xaa_{19}\ Xaa_{20}\ Xaa_{21}\ Xaa_{22}\ Xaa_{23}\ Xaa_{24}$ (SEQ ID NO : 9)

wherein Xaa in position 1 is Asn, Ser, Gly, His, Ala, Pro, Arg or none
Xaa in position 2 is Asn, Ala or Lys
Xaa in position 3 is Pro, Gln, Gly, Ile or Leu
Xaa in position 7 is Val or Ala
Xaa in position 8 is Gly or Lys
Xaa in position 9 is Glu, Asp, Lys, Phe or Thr
Xaa in position 10 is Ile, Met, Val or Leu
Xaa in position 11 is Tyr, Leu or none
Xaa in position 12 is Ser or none
Xaa in position 13 is Arg or none
Xaa in position 14 is Asp, Arg, Trp, Ala or none
Xaa in position 15 is Ile or none
Xaa in position 16 is Tyr or none
Xaa in position 17 is Lys or Arg
Xaa in position 18 is Arg, Lys or Asp
Xaa in position 19 is Trp or Gly
Xaa in position 20 is Ile, Met, Val, Gln or Ala
Xaa in position 21 is Ile, Val or Ala

Xaa in position 22 is Leu, Met or Val
Xaa in position 23 is Gly or Cys
Xaa in position 24 is Leu or none
wherein the sequence of SEQ ID NO : 9 consists of at least six consecutive amino acids and n = 1,2 or 3, and

$Xaa_1\ Xaa_2$ Ile Ile $Xaa_5\ Xaa_6\ Xaa_7\ Xaa_8\ Xaa_9$ Leu $Xaa_{11}\ [Gly]_n\ [Arg]_m\ Xaa_{12}\ Xaa_{13}\ Xaa_{14}\ Xaa_{15}\ Xaa_{16}\ Xaa_{17}\ Xaa_{18}\ Xaa_{19}\ Xaa_{20}\ Xaa_{21}\ Xaa_{22}\ Xaa_{23}\ Xaa_{24}\ Xaa_{25}$ (SEQ ID NO : 15)

wherein the Xaa in position 1 is Pro, Lys, Arg or none
Xaa in position 2 is Glu, Arg, Phe or Lys
Xaa in position 5 is Pro or Thr
Xaa in position 6 is Met, Thr or Nleu
Xaa in position 7 is Phe or Leu
Xaa in position 8 is Ser, Thr, Ala or Met
Xaa in position 9 is Ala, Glu or Leu
Xaa in position 11 is Ser or none
Xaa in position 12 is Ala, Arg or none
Xaa in position 13 is Ile, Leu or none
Xaa in position 14 is Ser, Ala, Leu or none
Xaa in position 15 is Tyr, Glu or Asp
Xaa in position 16 is Gly or Asp
Xaa in position 17 is Ala or Leu
Xaa in position 18 is Thr, Ile, Val, Leu or Asn,
Xaa in position 19 is Pro, Thr or Ser
Xaa in position 20 is Tyr, Phe, Nleu, His or Gln
Xaa in position 21 is Asp, Asn, Leu or Ala
Xaa in position 22 is Leu, Ile, Val or Asn
Xaa in position 23 is Asn, Tyr, Cys or Gly
Xaa in position 24 is Thr, Met, Ile, Ala, Val or none
Xaa in postion 25 is Gly or none
wherein the sequence of SEQ ID NO : 15 consists of at least six consecutive amino acids, n = 1, 2 or 3 and m= 0, 1, 2 or 3 independent of each other,

the terminal ends of the sequences may be free carboxyl- or amino groups, amides, acyls, acetyls or salts thereof,
two or more of the Cys residues may form part of an intrachain- or interchain disulphide binding, a -S-$(CH_2)_p$-S- or a - $(CH_2)_p$-bridge wherein p = 1-8 optionally intervened by one or more heteroatoms such as O, N and S and/or the said peptide sequences are immobilized to a solid support.

2. Peptide according to claim 1, characterized in that the amino acid sequence of SEQ ID NO : 1 is selected from the groups of SEQ ID NO : 2 and SEQ ID NO : 3.

3. Peptide according to claim 1, characterized in that the amino acid sequence of SEQ ID NO : 4 is selected from the groups of SEQ ID NO : 5, SEQ ID NO : 6, SEQ ID NO : 7 and SEQ ID NO : 8.

4. Peptide according to claim 1, characterized in that the amino acid sequence of SEQ ID NO : 9 is selected from the groups of SEQ ID NO : 10 SEQ ID NO : 11, SEQ ID NO : 12, SEQ ID NO : 13 and SEQ ID NO : 14.

5. Peptide according to claim 1, characterized in that the amino acid sequence of SEQ ID NO : 15 is selected from the groups of SEQ ID NO : 16, SEQ ID NO : 17, SEQ ID NO : 18, SEQ ID NO : 19 and SEQ ID NO : 20.

6. Antigen, characterized in that it comprises at least one peptide according to claim 1.

7. Antigen according to claim 6, characterized in that it comprises at least one peptide selected from each of the groups SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 9 and SEQ ID NO : 15.

8. Vaccine composition, characterized in that it comprises an antigen according to claim 6 with a pharmaceutically acceptable diluent and optionally an adjuvant, carrier and/or vehicle and optionally additional immunostimulatory compound(s).

9. Vaccine composition according to claim 8, characterized in that it comprises at least four peptides selected from each of the groups of SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 9 and SEQ ID NO : 15.

10. Vaccine composition according to claim 9, characterized in that it comprises the peptides of the SEQ ID NO : 3, SEQ ID NO : 6, SEQ ID NO : 11 and SEQ ID NO : 18.

11. Vaccine composition according to the claims 8-10 characterized in that the peptides are dissolved in a saline water solution and the optional immunostimulatory compound is a granulocyte macrophage growth factor.

12. Vaccine composition according to the claims 8-11 characterized in that the composition comprises an adjuvant selected from the group Monophosphoryl Lipid A (MPL®), Freund's complete or incomplete adjuvant or aluminum hydroxyd.

13. A method of detecting antibodies, induced by a HIV or HIV-specific peptides or proteins, in a sample of body fluid characterized in that subjecting the said sample to an immunoassay, wherein the antigen(s) is/are selected from the peptides of the claims 1, 2, 3 , 4 and 5.

14. An immunoassay kit for the detection of antibodies, induced by a HIV or HIV-specific peptides or proteins, in a sample of body fluid, characterized in that the diagnostic antigen is a peptide of any one of the previous claims 1 to 5.

15. Antibody, characterized in that it is capable of selectively reacting with the antigen of the claims 6 and 7.